

GRAPHICS PROCESSOR WITH GAMMA TRANSLATION

ABSTRACT OF THE DISCLOSURE

A graphics processor is provided that includes a linear-output gamma translator, a processor core, and a non-linear gamma translator. The graphics processor facilitates improved performance by translating image data into a linear gamma space for processing and rendering, and then translating rendered image data into non-linear gamma space for output to the display. The graphics processor uses the translated linear gamma space image data during internal pixel operations, resulting in superior rendering performance. Furthermore, because image data is translated into linear gamma space in the graphics processor, image data from different sources having different gamma representations can be more efficiently and accurately merged. The rendered image data is then translated to a non-linear gamma space and is outputted to the display device. The graphics processor is thus able to accurately process graphics data in linear gamma space while still receiving and outputting data in perceptively desirable non-linear gamma spaces.